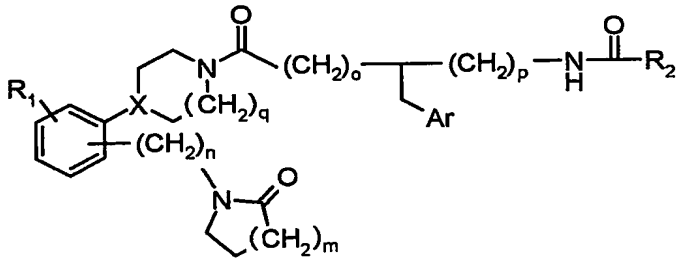
CLAIMS

1. A compound of structural formula (I):



(I)

or a pharmaceutically acceptable salt or solvate thereof, wherein

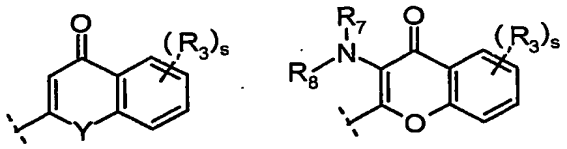
Ar is:

aryl or heteroaryl which may both be substituted or unsubstituted;

R_1 is independently:

hydrogen,
hydroxy,
cyano,
nitro,
halo,
alkyl,
alkoxy or
haloalkyl;

R_2 is:



each R_3 is independently:

hydrogen,
halo,
alkyl,
haloalkyl,
hydroxy,
alkoxy,
S-alkyl,
SO_2-alkyl,
O-alkenyl,
S-alkenyl,
$NR_7C(O)R_7$,
$NR_7SO_2R_7$,
$N(R_7)_2$
(D)-cycloalkyl,
(D)-aryl,
(D)-heteroaryl or
(D)-heterocyclyl (wherein heterocyclyl excludes a heterocyclyl containing a single nitrogen), and
wherein aryl, heteroaryl, heterocyclyl, alkyl and/or cycloalkyl may be substituted or unsubstituted, and two adjacent R_3 may form a 4- to 7-membered ring;

R_7 and R_8 are each independently:

hydrogen,
alkyl or
cycloalkyl, or

R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 8-membered ring,
wherein alkyl and cycloalkyl are both unsubstituted or substituted;

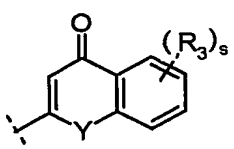
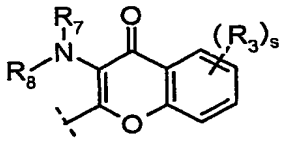
D is a bond or alkyl;
X is CH or N;
Y is O or NR_7;
n is 1 - 4;
m is 0 - 3;
o is 0 - 2;
p is 0 - 2;
q is 1 or 2;
s is 0 - 4.

2. The compound of claim 1, wherein

Ar is:
aryl which may be substituted with one to three substituents independently selected from the group consisting of cyano, nitro, perfluoroalkoxy, halo, alkyl, (D)-cycloalkyl, alkoxy and/or haloalkyl;

R_1 is independently:
hydrogen,
hydroxy,
halo,
alkyl,
alkoxy or
haloalkyl;

R_2 is:

each R_3 is independently:

hydrogen,
halo,
alkyl,
haloalkyl,
hydroxy,
alkoxy,
S-alkyl or
SO_2-alkyl,
O-alkenyl or
S-alkenyl;

R_7 and R_8 are each independently:

hydrogen,
alkyl or
cycloalkyl, or
R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 7-membered ring optionally containing an additional heteroatom selected from O, S and NR_4;

D is a bond or CH_2;
X is CH or N;
Y is NR_7 or O;
n is 1 or 2;
m is 1 - 3;
o is 0 or 1;
p is 0 or 1;

q is 1;
s is 1 - 3.

3. The compound of claim 1 or 2, wherein

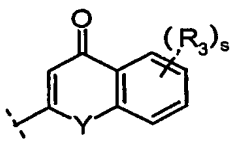
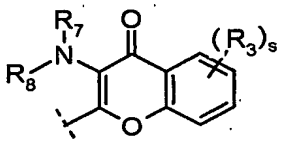
Ar is:

phenyl or naphthyl which may be substituted with one or two substituents independently selected from the group consisting of perfluoroalkoxy, halo, alkyl, alkoxy and haloalkyl;

R_1 is independently:

hydrogen,
alkoxy,
halo or
alkyl;

R_2 is:

each R_3 is independently:

hydrogen,
hydroxy,
alkoxy,
SO_2-alkyl or
iso-propyl;

R_7 and R_8 are each independently:

hydrogen or

alkyl, or

R_7 and R_8 together with the nitrogen to which they are attached form a 6-membered ring optionally containing an additional oxygen atom;

X is CH or N;

Y is N-alkyl or O;

n is 1;

m is 1 - 3;

o is 0 or 1;

p is 0 or 1;

q is 1.

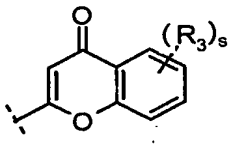
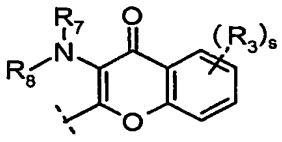
4. The compound of any of claims 1 to 3, wherein

Ar is:

phenyl or naphthyl which may be substituted with halo;

R_1 is hydrogen;

R_2 is:

each R_3 is independently:

hydrogen,

hydroxy,

alkoxy,

SO_2-alkyl or

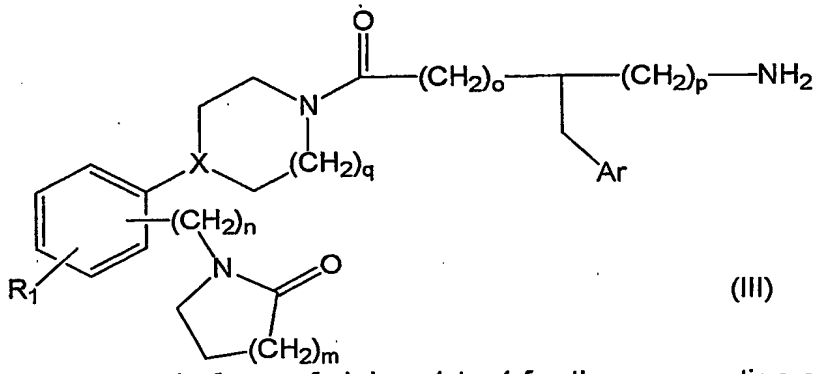
iso-propyl;

R_7 and R_8 are each independently:

hydrogen or
alkyl, or
R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 6-membered ring optionally containing an additional oxygen atom;

X is CH or N;
n is 1;
m is 1 or 2;
o is 0;
p is 0;
q is 1
s is 1 - 2.

5. The compound of any of claims 1 to 4 for use as a medicament.



(III)

6. Use of the compound of any of claims 1 to 4 for the preparation of a medicament for the treatment or prevention of disorders, diseases or conditions responsive to the inactivation or activation of the melanocortin-4 receptor.

7. Use according to claim 5 for the treatment or prevention of cancer cachexia.

8. Use according to claim 5 for the treatment or prevention of muscle wasting.

9. Use according to claim 5 for the treatment or prevention of anorexia.

10. Use according to claim 5 for the treatment or prevention of anxiety and/or depression.

11. Use according to claim 5 for the treatment or prevention of obesity.

12. Use according to claim 5 for the treatment or prevention of diabetes mellitus.

13. Use according to claim 5 for the treatment or prevention of male or female sexual dysfunction.

14. Use according to claim 5 for the treatment or prevention of erectile dysfunction.

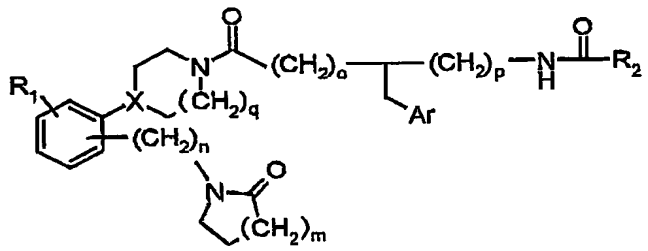
15. A pharmaceutical composition which comprises a compound of any of claims 1 to 4 and a pharmaceutically acceptable carrier.

AMENDED CLAIMS

[received by the International Bureau on 06 August 2004 (06.08.04);
original claims 1-15 replaced by amended claims 1-15]

NEW CLAIMS 1 - 15

1. A compound of structural formula (I):



(I)

or a pharmaceutically acceptable salt or solvate thereof, wherein

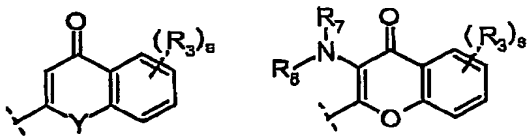
Ar is:

aryl or heteroaryl which may both be substituted or unsubstituted;

R_1 is independently:

hydrogen,
hydroxy,
cyano,
nitro,
halo,
alkyl,
alkoxy or
haloalkyl;

R_2 is:



each R_3 is independently:

hydrogen,
halo,
alkyl,
haloalkyl,
hydroxy,
alkoxy,
S-alkyl,
SO_2-alkyl,
O-alkenyl,
S-alkenyl,
$NR_7C(O)R_7$,
$NR_7SO_2R_7$,
$N(R_7)_2$
(D)-cycloalkyl,
(D)-aryl,
(D)-heteroaryl or
(D)-heterocyclyl (wherein heterocyclyl excludes a heterocyclyl containing a single nitrogen), and
wherein aryl, heteroaryl, heterocyclyl, alkyl and/or cycloalkyl may be substituted or unsubstituted, and two adjacent R_3 may form a 4- to 7-membered ring;

R_7 and R_8 are each independently:

hydrogen,
alkyl or
cycloalkyl, or
R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 8-membered ring,
wherein alkyl and cycloalkyl are both unsubstituted or substituted;

D is a bond or alkyl;
X is CH or N;
Y is O or NR_7;
n is 1 - 4;
m is 0 - 3;
o is 0 - 2;
p is 0 - 2;
q is 1 or 2;
s is 0 - 4.

2. The compound of claim 1, wherein

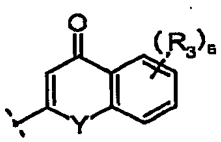
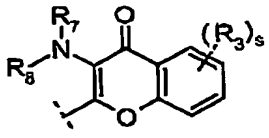
Ar is:

aryl which may be substituted with one to three substituents independently selected from the group consisting of cyano, nitro, perfluoroalkoxy, halo, alkyl, (D)-cycloalkyl, alkoxy and/or haloalkyl;

R_1 is independently:

hydrogen,
hydroxy,
halo,
alkyl,
alkoxy or
haloalkyl;

R_2 is:

each R_3 is independently:

hydrogen,
halo,
alkyl,
haloalkyl,
hydroxy,
alkoxy,
S-alkyl or
SO_2-alkyl,
O-alkenyl or
S-alkenyl;

R_7 and R_8 are each independently:

hydrogen,
alkyl or
cycloalkyl, or
R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 7-membered ring optionally containing an additional heteroatom selected from O, S and NR_4;

D is a bond or CH_2;
X is CH or N;
Y is NR_7 or O;
n is 1 or 2;

m is 1 - 3;
o is 0 or 1;
p is 0 or 1;
q is 1;
s is 1 - 3.

3. The compound of claim 1 or 2, wherein

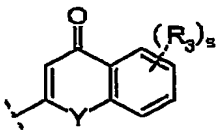
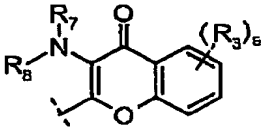
Ar is:

phenyl or naphthyl which may be substituted with one or two substituents independently selected from the group consisting of perfluoroalkoxy, halo, alkyl, alkoxy and haloalkyl;

R_1 is independently:

hydrogen,
alkoxy,
halo or
alkyl;

R_2 is:

each R_3 is independently:

hydrogen,
hydroxy,
alkoxy,
SO_2-alkyl or
iso-propyl;

R_7 and R_8 are each independently:

hydrogen or

alkyl, or

R_7 and R_8 together with the nitrogen to which they are attached form a 6-membered ring optionally containing an additional oxygen atom;

X is CH or N;

Y is N-alkyl or O;

n is 1;

m is 1 - 3;

o is 0 or 1;

p is 0 or 1;

q is 1.

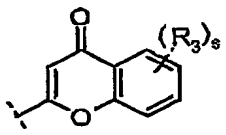
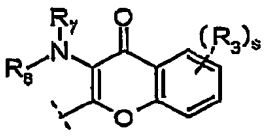
4. The compound of any of claims 1 to 3, wherein

Ar is:

phenyl or naphthyl which may be substituted with halo;

R_1 is hydrogen;

R_2 is:

each R_3 is independently:

hydrogen,

hydroxy,

alkoxy,

SO_2-alkyl or

iso-propyl;

R_7 and R_8 are each independently:
hydrogen or
alkyl, or
R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 6-membered ring optionally containing an additional oxygen atom;

X is CH or N;
n is 1;
m is 1 or 2;
o is 0;
p is 0;
q is 1
s is 1 - 2.

5. The compound of any of claims 1 to 4 for use as a medicament.

6. Use of the compound of any of claims 1 to 4 for the preparation of a medicament for the treatment or prevention of disorders, diseases or conditions responsive to the modulation of the melanocortin-4 receptor in a mammal, where modulation means activation in the case of MC4-R agonists or inactivation in the case of MC4-R antagonists.

7. Use of MC4-R antagonists according to claims 6 for the preparation of a medicament for the treatment or prevention of cancer cachexia.

8. Use of MC4-R antagonists according to claims 6 for the preparation of a medicament for the treatment or prevention of muscle wasting.

9. Use of MC4-R antagonists according to claims 6 for the preparation of a medicament for the treatment or prevention of anorexia.

10. Use of MC4-R antagonists according to claims 6 for the preparation of a medicament for the treatment or prevention of anxiety and/or depression.

11. Use of MC4-R agonists according to claims 6 for the preparation of a medicament for the treatment or prevention of obesity.

12. Use of MC4-R agonists according to claims 6 for the preparation of a medicament for the treatment or prevention of diabetes mellitus.

13. Use of MC4-R agonists according to claims 6 for the preparation of a medicament for the treatment or prevention of male or female sexual dysfunction.

14. Use of MC4-R agonists according to claims 6 for the preparation of a medicament for the treatment or prevention of erectile dysfunction.

15. A pharmaceutical composition which comprises a compound of any of claims 1 to 4 and a pharmaceutically acceptable carrier.